

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

<b>SHERWIN-WILLIAMS CO.,</b>	)	
	)	
Plaintiffs,	)	
	)	
v.	)	Civ. A. No. 17-01023
	)	
<b>PPG INDUSTRIES, INC.,</b>	)	
	)	
Defendants.	)	
	)	

**MEMORANDUM OPINION**

**CONTI, Chief District Judge**

**I. INTRODUCTION**

This patent infringement case involves five patents (the “Asserted Patents”), i.e., U.S. Patent Nos. 8,617,663 (the “’663 Patent”); 8,835,012 (the “’012 Patent”); 9,242,763 (the “’763 Patent”); 9,415,900 (the “’900 Patent”); and 9,862,854 (the “’854 Patent”). (ECF No. 194.) The Asserted Patents are continuations of U.S. Patent No. 8,173,265, which is a continuation-in-part of U.S. Patent No. 7,592,047 (the “’047 Patent”). (ECF No. 207 at 2.) The Asserted Patents share the same specification and relate, generally, to a coating composition for the interior of food or beverage cans that includes an emulsion polymerized latex polymer and is substantially free of bisphenol A (“BPA”), along with methods of using such coatings. (’900 Patent, col. 1, ll. 41–43; 49–52; 56–58.)

The parties submitted a joint disputed claim terms chart along with the appendices containing intrinsic evidence. (ECF Nos. 214, 215, 216.) Sherwin-Williams Company (“Sherwin”) filed an opening claim construction brief, to which PPG Industries, Inc. (“PPG”) responded. (ECF Nos. 220, 230.) Both parties filed identifications of extrinsic evidence with their initial briefs and

cross-objections to the opposing party’s extrinsic evidence. (ECF Nos. 221, 232, 231, 249.) Sherwin also filed a claim construction reply brief which was followed by PPG’s sur-reply claim construction brief. (ECF Nos. 248, 265.) Once the matter was fully briefed, the court held a technology tutorial and a claim construction hearing.<sup>1</sup> (ECF No. 266 (Tr.).)

Initially, the parties requested construction of two claim terms, and PPG contended that three additional claim terms were indefinite and, therefore, invalid. (ECF No. 214 at 2–15.) The parties also stipulated to an agreed upon construction of an originally disputed claim. (ECF No. 214-1 at 1.) Subsequently, PPG withdrew its proposed construction of one of the disputed terms along with one of its indefiniteness challenges and, therefore, adopted Sherwin’s construction of those terms.<sup>2</sup> (ECF No. 230 at 7 n.1.) With respect to the final disputed term—if the court determines it to be limiting—the parties agree to its construction and scope. (ECF Nos. 248 at 7 n.4; 248-3; 266 at 79, 82–83, 87.) Accordingly, as reflected in the chart below, the court must resolve two indefinite challenges and ascertain whether one claim term is limiting.

Disputed Term	Sherwin’s Construction	PPG’s Construction
1. “quaternary salt linkage”	“linkage resulting from a tertiary amine neutralized acid-functional polymer reacting with an oxirane-functional monomer or polymer”	PPG agrees to Sherwin’s construction
2. “global extraction result”	Not indefinite; “result from the test described at ’900 patent, col. 23, ll. 49–63”	Indefinite under 35 U.S.C. § 112, ¶ 2

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<sup>1</sup> After the claim construction hearing, and well beyond the close of briefing, PPG filed another piece of extrinsic evidence asserting it was a “First Notice of Supplemental Authority.” (ECF No. 271.) PPG did not seek approval of its desire to open the briefing. This exhibit is untimely and will, therefore, not be considered by the court in its claim construction analysis.

<sup>2</sup> The court has an “independent obligation to determine the meaning of the claims, notwithstanding the views asserted by the adversary parties.” X2Y Attenuators, LLC v. Int’l Trade Comm’n, 757 F.3d 1358, 1365 (Fed. Cir. 2014) (quoting Exxon Chem. Patents, Inc. v. Lubrizol Corp., 64 F.3d 1553, 1555 (Fed. Cir. 1995)). After reviewing the intrinsic record, the court finds adequate support for the parties’ stipulated constructions and, therefore, adopts those constructions as set forth in the accompanying order.

3. “the coating composition is suitable for forming an inside spray coating of a two-piece drawn and ironed aluminum beverage can”	Not indefinite; plain and ordinary meaning	Indefinite under 35 U.S.C. § 112, ¶ 2
4. “polymerizable unsaturated monomer”	Not indefinite; Plain and ordinary meaning: “polymerizable unsaturated monomer used to generate the acid- or anhydride-functional acrylic polymer”	PPG agrees to Sherwin’s construction
5. “inside spray beverage can coating composition” <sup>3</sup>	This term is limiting	This term is not limiting

## II. LEGAL STANDARDS

### A. Generally Applicable Principles of Claim Construction

Claim construction is a question of law. Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 837 (2015) (citing Markman v. Westview Instruments, Inc., 517 U.S. 370, 388–91 (1996)). “It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks and citations omitted). “[T]he words of a claim are generally given their ordinary and customary meaning[,]” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” Id. at 1312–13 (internal quotation marks and citations omitted). In arriving at this meaning, courts consider intrinsic evidence which includes “the words of the claims themselves, the remainder of the specification, [and] the prosecution history,” along with “extrinsic evidence concerning relevant scientific principles, the meaning of

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<sup>3</sup> The parties agree that—if limiting—this term means “a coating composition that can be spray applied to a metal substrate such as a can using spray equipment.” (ECF No. 266 at 87.)

technical terms, and the state of the art.” Id. at 1313 (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

“[T]he language of the claim frames and ultimately resolves all issues of claim interpretation.” Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1324 (Fed. Cir. 2002) (quoting Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1023 (Fed. Cir. 1997)). While claim language “provide[s] substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered. Phillips, 415 F.3d at 1314. Furthermore, “[o]ther claims of the patent in question, both asserted and unasserted,” can be highly instructive because “terms are normally used consistently throughout the patent.” Id. (citations omitted). “Differences among claims can also be a useful guide in” claim construction. Id. (citation omitted). Under the doctrine of claim differentiation, “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” Id. at 1314–15 (citation omitted).

Claims “must be read in view of the specification, of which they are a part.” Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), aff’d, 517 U.S. 370 (1996). “The specification may assist in resolving ambiguity where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” Teleflex, 299 F.3d at 1325. “Usually, [the specification] is dispositive; it is the single best guide to the meaning of a disputed term.” Phillips, 415 F.3d at 1315 (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “Although the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571 (Fed. Cir. 1988)

(citations omitted). “Even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intent to limit the claim scope ‘using words or expressions of manifest exclusion or restriction.’” Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 906 (Fed. Cir. 2004) (quoting Teleflex, 299 F.3d at 1327).

In their claim construction analysis, courts “should also consider the patent’s prosecution history, if it is in evidence.” Markman, 52 F.3d at 980 (citing Graham v. John Deere Co., 383 U.S. 1, 33 (1966)). A patent’s prosecution history “consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” Phillips, 415 F.3d at 1317 (citation omitted). “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” Id. The reexamination history of a patent is also part of its prosecution history. Sonix Tech. Co. v. Publ’ns Int’l, Ltd., 844 F.3d 1370, 1379 (Fed. Cir. 2017) (citing Info-Hold, Inc. v. Applied Media Techs. Corp., 783 F.3d 1262, 1266 (Fed. Cir. 2015)).

Finally, “[i]n some cases,” courts “need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” Teva, 135 S. Ct. at 841 (citation omitted). “Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” Markman, 52 F.3d at 980. However, “[e]xtrinsic evidence is to be used for the court’s understanding of the patent, not for the purpose of varying or contradicting the terms of the

claims.” Id. at 981. “In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence.” Vitronics, 90 F.3d at 1583 (citations omitted). In sum, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” Renishaw PLC v. Marposs Societa per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (citations omitted).

## **B. Indefiniteness**

Section 112 requires that a patent specification “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2. This provision mandates that “a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120, 2129 (2014). The definiteness requirement of § 112, ¶ 2 strikes a “delicate balance” between the “inherent limitations of language” and providing “clear notice of what is claimed.” Id. (citations omitted). However, “absolute precision is unattainable.” Id. “[T]he certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter.” Id. (quoting Minerals Separation, Ltd. v. Hyde, 242 U.S. 261, 270 (1916)). Whether a claim meets the definiteness requirement is a question of law. Amgen Inc. v. F. Hoffman–LA Roche Ltd., 580 F.3d 1340, 1371 (Fed. Cir. 2009). Indefiniteness must be proven by clear and convincing evidence. Sonix Tech. Co. v. Publ’ns Int’l, Ltd., 844 F.3d 1370, 1377 (Fed. Cir. 2017) (citing Teva Pharm. USA, Inc. v. Sandoz, Inc., 789 F.3d 1335, 1345 (Fed. Cir. 2015)).

### **C. Claim Construction and Patent Families**

“Where multiple patents derive from the same parent application and share many common terms,” courts “must interpret the claims consistently across all asserted patents.” SightSound Techs., LLC v. Apple Inc., 809 F.3d 1307, 1316 (Fed. Cir. 2015) (internal quotation marks and citation omitted). “Any statement of the patentee in the prosecution of a related application as to the scope of the invention [is] relevant to claim construction[.]” Microsoft Corp. v. Multi-Tech Systems, 357 F.3d 1340, 1350 (Fed. Cir. 2004). “When multiple patents derive from the same initial application, the prosecution history regarding a claim limitation in any patent that has issued applies with equal force to subsequently issued patents that contain the same claim limitation.” Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 980 (Fed. Cir. 1999) (citing Jonsson v. The Stanley Works, 903 F.2d 812, 817–18 (Fed. Cir. 1990)).

## **III. CONSTRUCTION OF DISPUTED CLAIM TERMS**

### **A. Person of Ordinary Skill in the Art**

The parties provided the court with proposed definitions of the Person of Ordinary Skill in the Art (the “POSITA”) at the time of the inventions set forth in the Asserted Patents. Sherwin describes the POSITA as having

at least a bachelor’s degree in a field such as chemistry, organic chemistry, chemical engineering, materials science, or a similar subject, as well as at least four years of practical experience in the field of coatings for food and beverage containers, including experience with inside spray coatings for beverage cans.

(ECF No. 220 at 21.) PPG describes the POSITA as having a

Bachelor’s degree in chemistry, polymer science, chemical engineering, mechanical engineering (including materials science), or a similar discipline, as well experience in the coatings field (such as development, use, testing, or optimization of coatings for end uses). The more education one has (e.g., additional studies, coursework, or degrees), the less experience needed to attain an

ordinary level of skill. Likewise, more extensive experience might substitute for some educational requirements.

(ECF No. 230 at 9–10.) The court need not resolve the minor differences between the parties’ definitions of the POSITA because they are not dispositive with respect to any claim construction or indefiniteness dispute.

## **B. Claims to be Construed**

The court must decide whether two claim terms are indefinite and determine whether one claim term is limiting.

### **1. “global extraction result”<sup>4</sup>**

Asserted Patents and Claims	Sherwin’s Construction	PPG’s Construction
’763 Patent: claim 40 ’012 Patent: claim 24 ’900 Patent: claim 19 ’854 Patent: claims 1, 6, 15, 20	Not indefinite; “result from the test described at ’900 patent, col. 23, ll. 49–63”	Indefinite under 35 U.S.C. § 112, ¶ 2

The “global extraction test is designed to estimate the total amount of mobile material that can potentially migrate out of a coating and into food packed in a coated can.” (’900 Patent, col. 23, ll. 40–42.) Certain claims of the Asserted Patents require that the coating achieve a specified “global extraction result.” For example, claim 19 of the ’900 Patent requires the coating composition cured under the conditions described in that claim to “exhibit[ ] a global extraction result of less than 10 ppm.” (*Id.* at col. 58 ll. 62–67.) The specification explains that “[a]cceptable extraction conditions and media can be found in 21 CFR 175.300 paragraph (d) and (e).” (*Id.* at col. 23 ll. 44–46.) The next paragraph states that “[t]he extraction procedure used in the current

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<sup>4</sup> Sherwin’s proposed construction of the “global extraction result” cites to the ’012 Patent’s specification. However, throughout this opinion the court references the ’900 Patent’s specification which, for all pertinent purposes, is identical to specification of the ’012 Patent. Therefore, to be consistent, the court will cite to the relevant specification passages from the ’900 Patent in construing this claim term as well.



invention is described in 21 CFR 175.300 paragraph (e)(4)(xv)” with certain, explicit “modifications to ensure worst-case scenario performance . . . .” (Id. at ll. 49–52.) After listing those modifications, the specification provides that “the amount of extractives was determined as described in 21 CFR 175.300 paragraph (e)(5) . . . .” (Id. at ll. 59–61.) The dispute between the parties is whether a POSITA can determine, with reasonable certainty, how to calculate the “global extraction result.”

**a. Parties’ Arguments**

Sherwin asserts that the POSITA would understand, with the requisite reasonable certainty, that the “global extraction result” must be calculated using the procedure described in 21 CFR § 175.300 paragraph (e)(4)(xv). (ECF No. 220 at 18.) PPG, on the other hand, reads the specification as endorsing all the procedures in 21 C.F.R. § 175.300(d) and (e) for calculating the “global extraction result,” and argues that Sherwin did not incorporate any of these procedures into the claims. (ECF No. 230 at 27–28.) Therefore, PPG contends that a POSITA cannot determine, with reasonable certainty, which one of over a dozen acceptable procedures set forth in 21 C.F.R. § 175.300(d) and (e) must be utilized to calculate the “global extraction result.” (Id. at 27.) PPG also argues that all these tests are found in the “Examples” section of the specification with an explicit disclaimer that these examples “are not to be construed as limiting the scope” of the invention. (Id. at 29.) Accordingly, PPG construes the specific reference to 21 CFR § 175.300 paragraph (e)(4)(xv) as, at best, relating to a preferred embodiment that must not be read into the claims. (Id.)

**b. Analysis**

The court agrees with Sherwin that, based upon the specification, a POSITA would understand, with reasonable certainty, how to calculate the “global extraction result.” The record reflects that “global extraction result” is a measurable quantitative value, that is, the total amount

of mobile material that can potentially migrate out of a coating and into food packed in a coated can. The claim language, however, does not delineate a procedure for measuring this value. Therefore, the court turns to the specification for guidance. The specification explains that there are various acceptable procedures to calculate a “global extraction result,” which are listed in 21 C.F.R. § 175.300(d) and (e). Out of those procedures, the specification adopts the one described in § 175.300 paragraph (e)(4)(xv) with certain explicitly stated modifications. In sum, the specification acknowledges that “multiple known approaches exist,” but informs the POSITA of “which approach to select[ ]” to calculate the global extraction result. Dow Chemical Co. v. Nova Chemicals Corp. (Canada), 803 F.3d 620, 630 (Fed. Cir. 2015).

PPG’s argument that, because it appears in the “Examples” section of the specification, the procedure described in 21 CFR § 175.300 paragraph (e)(4)(xv) relates, at best, to a preferred embodiment is untenable for two reasons. (ECF Nos. 230 at 29; 265 at 5.) First, the language in the specification explicitly states that the aforementioned extraction procedure is “used in the current invention[.]” (’900 Patents, col. 23, ll. 49–50.) Therefore, it would be an error to confine this procedure only to a preferred embodiment, as PPG suggests, because “[w]hen a patentee ‘describes the features of the present invention as a whole,’ he implicitly alerts the reader that ‘this description limits the scope of the invention.’” Luminara Worldwide, LLC v. Liown Elecs. Co., 814 F.3d 1343, 1353 (Fed. Cir. 2016) (quoting Regents of the Univ. of Minn. v. AGA Med. Corp., 717 F.3d 929, 936 (Fed. Cir. 2013)). Second, the specification further provides that “[p]referred coatings give global extraction results of less than 50ppm, more preferred results of less than 10ppm, even more preferred results of less than 1ppm.” (’900 Patent, col. 23, ll. 63–65.) Whether a coating composition is a preferred embodiment of the invention is not tied to the procedure used

to calculate the “global extraction result;” rather, it depends on the numerical value of the “global extraction result.”

Based upon the foregoing, the court finds that PPG failed to prove by clear and convincing evidence that the claim term “global extraction result” is indefinite. Accordingly, the court construes “global extraction result” as the “result from a test described at ’900 Patent, col. 23, ll. 49–63.”

**2. “the coating composition is suitable for forming an inside spray coating of a two-piece drawn and ironed aluminum beverage can” (the “suitable for” term)**

Asserted Patents and Claims	Sherwin’s Construction	PPG’s Construction
’900 Patent: claims 1, 3, 6, 8, 10, 12, 13, 16, 17, 19, 24, 26, 27, 29, 31, 32, 34, 36, 38, 39, 43, 44, 47, 50, 52, 53, 55, 57, 68, 70, 71, 73	Not indefinite; plain and ordinary meaning	Indefinite under 35 U.S.C. § 112, ¶ 2

The ’900 Patent’s claims require that “[t]he coating composition is suitable for forming an inside spray coating of a two-piece drawn and ironed aluminum beverage can.” (’900 Patent, claim 1.) The dispute between the parties is whether a POSITA can determine, with reasonable certainty, what makes a coating composition “suitable for” use as a spray-applied interior-can coating.

**a. Parties’ Arguments**

Sherwin primarily argues that the “suitable for” term should be given its plain and ordinary meaning because a POSITA in the interior-can coatings’ industry fully understands what makes a composition “suitable for” use as a spray-applied interior-can coating. (ECF. No. 220 at 21.) Sherwin also draws the court’s attention to the “Background” section of the ’900 Patent as identifying four specific criteria—high-speed application to the substrate; safe for food contact; excellent adhesion to the substrate; and resist degradation over long periods of time—as providing further certainty to the scope of the claims. (*Id.*) Relying on its expert’s declaration, Sherwin asserts

that the POSITA would not only “inherently know what makes a coating suitable for use as a coating on the interior of a beverage can, but [also] that the specification comports with this knowledge.” (Id. at 23.) Finally, Sherwin presents PPG’s marketing materials—that describe PPG’s own coatings using the “suitable for” language—as further evidence that the disputed term has an established meaning in the interior-can coatings’ industry. (Id.)

PPG maintains that the “suitable for” term is a term of degree and that the specification fails to provide objective guidance by which one could determine, with reasonable certainty, when a coating is “suitable” to act as a spray-applied interior-can coating. (ECF No. 230 at 10–11.) PPG argues that the specification discloses different tests for assessing various performance characteristics of coating compositions but does not identify “which tests must be passed, how many must be passed, or how test results should be balanced, in order to determine when a coating is ‘suitable’ for beverage cans.” (Id. at 12.) PPG asserts that Sherwin’s reliance on the “Background” section is misplaced because the “suitable for” term is not used in that section, there is no explanation why the criteria listed there are determinative of suitability, and those criteria are equally indefinite. (Id. at 14–15.)

PPG contends that giving the “suitable for” term its plain and ordinary meaning would allow Sherwin to “later argue it to mean whatever Sherwin wants.” (Id. at 11.) In support of this contention, PPG claims that the prosecution history of the ’047 Patent—the parent patent of the Asserted Patents—reflects that Sherwin repeatedly argued to the USPTO that in order to be “suitable for” use as a spray-applied interior-can coating, a composition must have an undefined “balance” of “stringent properties.” (Id. at 15–16.) According to PPG, however, Sherwin’s list of these “stringent properties” has never been objectively bounded and has, in fact, evolved over time.

(Id. at 15.) PPG argues that such a “moving target” renders the “suitable for” term indefinite. (Id. at 18.)

Relying on its expert’s declaration, PPG asserts that the “suitable for” term is indefinite because suitability requires compliance with individual customer requirements which “is a subjective process that varies based on each customer.” (Id.) Finally, PPG rejects Sherwin’s notion that the “suitable for” term has an established meaning as reflected in PPG’s own marketing materials related to coatings because those materials “long post-date the ’900 Patent and are not properly considered.” (Id. at 21 n.13.)

#### **b. Analysis**

The court agrees with Sherwin that the POSITA can determine, with reasonable certainty, what makes a coating composition “suitable for” use as a spray-applied interior-can coating. The claim language, which is the starting point of the court’s analysis, does not define the scope of the “suitable for” term. The specification, however, identifies certain base-line requirements that provide objective boundaries for the “suitable for” term. The prosecution history reveals not only that the POSITA would understand the “suitable for” term as falling within those base-line requirements, but also that the requirements associated with the “suitable for” term are well known in the interior-can coatings’ industry.

#### **i. The specification**

The “Background” section of the ’900 Patent states that:

Packaging coatings should preferably be capable of high-speed application to the substrate and provide the necessary properties when hardened to perform in this demanding end use. For example, the coating should be safe for food contact, have excellent adhesion to the substrate, and resist degradation over long periods of time, even when exposed to harsh environments.

(’900 Patent, col. 1, ll. 36–40.) (emphasis added). In the court’s view, the above emphasized baseline characteristics “provide[ ] enough certainty to one of skill in the art when read in the context of the invention” to render the “suitable for” term definite. Sonix Tech. Co. v. Publ’ns Int’l, Ltd., 844 F.3d 1370, 1377 (Fed. Cir. 2017) (quoting Interval Licensing LLC v. AOL, Inc., 766 F.3d 1364, 1369 (Fed. Cir. 2014)). The specification’s language that such coatings “provide the necessary properties when hardened to perform in this demanding end use,” further reflects that there are certain requirements specific to these coating compositions. (’900 Patent, col. 1, ll. 35–37.) The prosecution history of the ’047 Patent, discussed in the next section, confirms that those requirements are well known in the interior-can coatings’ industry.

PPG also argues that the “suitable for” term is indefinite because the specification discloses various tests for assessing characteristics of a coating without providing absolute pass/fail criteria for these tests. (ECF No. 230 at 12.) This argument is untenable for three reasons. First, as Sherwin correctly argues, “a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.” Sonix Tech., 844 F.3d at 1377. (ECF. No. 248 at 3.) Second, the court agrees with Sherwin that these tests are tools that the POSITA “can use to assess properties of a coating but are not themselves the criteria for determining whether” a coating composition is “suitable for” use as a spray-applied interior-can coating.<sup>5</sup> (Id.) Third, as Sherwin accurately contends, the “claims directed to these specific tests are set forth separately in the dependent claims,”—e.g., claims 19–21, 35–38, 49–52 of the ’900 Patent—and “[u]nder the

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<sup>5</sup> PPG acknowledged the existence of these tests in the past. During the *inter partes* reexamination of the ’047 Patent, PPG argued that its prior art patent disclosed “subject[ing] the coated aluminum panels to tests that were recognized in the art to demonstrate suitability for beverage can coatings.” (ECF No. 216-11 at 15–16.)

doctrine of claim differentiation, the specific tests and numerical values set forth in the dependent claims are presumed to have different meaning[s].”<sup>6</sup> (Id. at 3–4.)

Based upon the foregoing, it is evident that the base-line requirements identified in the specification provide sufficient objective boundaries for the POSITA to determine, with reasonable certainty, what makes a coating composition “suitable for” use as a spray-applied interior-can coating. Therefore, the “suitable for” term is not indefinite.

## **ii. Prosecution History**

PPG claims that the ’047 Patent’s prosecution history reflects that the “suitable for” term envisages a coating composition with an “undefined balance” of “stringent properties.” (ECF No. 230 at 15.) PPG asserts that the “suitable for” term is indefinite because Sherwin’s list of these “stringent properties” is objectively unbounded and has evolved over time. (Id.) The court’s review of the ’047 Patent’s prosecution history, however, reveals that PPG failed to prove by clear and convincing evidence that the “suitable for” term is indefinite. In fact, as explained below, ’047 Patent’s prosecution history reflects that the “stringent properties” associated with the “suitable for” term are not only well known in the interior-can coatings’ industry, but are also within the scope of the base-line requirements outlined in the specification.

During prosecution of the ’047 Patent, the examiner found that a PPG prior art patent, U.S. Patent No. 4,692,491 (“Ranka”), disclosed all the compositional elements of the ’047 Patent’s independent claims. (ECF No. 215-24.) In response, Sherwin argued that the claimed coating compositions in its application were “suitable food-contact coatings of food or beverage cans,”

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<sup>6</sup> Sherwin’s claim differentiation argument is supported by the prosecution history of ’047 Patent where, after explaining that can interior coatings must exhibit a balance of stringent coating properties, Sherwin noted that “[i]n preferred embodiments, the coating composition of the invention exhibits a suitable balance of [those] properties . . . .” (ECF No. 216-2 at 8.)

and that to be “suitable for food-contact applications, a coating must exhibit a balance of stringent coating properties.” (ECF No. 216-2 at 8.) Sherwin explained that, “[i]n preferred embodiments, the coating composition of the invention exhibits a suitable balance of [those] properties . . . .” (Id.) Sherwin asserted that while Ranka discloses a polymer that may be useful in coating applications, it does not “disclose using [that] polymer in coatings intended for any particular end use, let alone in food or beverage packaging coating.” (Id. at 9.) Sherwin was able to overcome the examiner’s obviousness rejection by arguing that the POSITA seeking a food or beverage can coating would have no reason to focus on or pick the Ranka composition.<sup>7</sup> (Id. at 10.)

Once the ’047 Patent issued, PPG challenged its validity in an *inter partes* reexamination proceeding. (ECF No. 216-11.) PPG argued that U.S. Patent No. 5,714,539 (“Perez”)—another PPG prior art patent—“teaches the coating compositions of claim 1 of the ’047 Patent, as well as their suitability to coat beverage cans.” (Id. at 15.) PPG listed several reasons why a POSITA would have understood Perez to teach the suitability of its compositions to coat the inside surfaces of beverage-cans including the fact that Perez disclosed “subject[ing] the coated aluminum panels to tests that were recognized in the art to demonstrate suitability for beverage can coatings.” (Id. at 15–16.) The examiner agreed with PPG and found that Perez disclosed the composition claimed in the ’047 Patent. (ECF No. 215-29.) In response, Sherwin narrowed the claims of the ’047 Patent “to coating compositions for the *inside surfaces* of food and beverage cans.” (ECF No. 216-12 at 18.) Sherwin asserted that this was a significant limitation because “[c]an-interior coatings are specialty products that must meet stringent requirements.” (Id. at 18, 22.) Sherwin argued that a

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<sup>7</sup> PPG’s assertion that, at this stage, “Sherwin’s core argument was that its coating compositions were novel and non-obvious because they exhibited “**a suitable balance**” of these properties[.]” is not supported by the record. (ECF No. 230 at 16.)



POSITA would not have looked to Perez as the starting point for an interior-can coating because Perez does not discuss those stringent requirements at all.<sup>8</sup> (Id. at 27.)

Sherwin submitted evidence documenting the industry's view of the art regarding the stringent requirements for interior-can coatings. (Id. at 22–26.) Sherwin referenced an article written by PPG's own expert in that proceeding, Dr. Raymond Good. (Id. at 22.) In that article, Dr. Good discussed some of the demands placed on interior-can coatings and noted that, among other things, such coatings must have low applied cost, good corrosion resistance, good abuse resistance, and impart no off flavor to product.<sup>9</sup> (Id. at 22–23.) Sherwin offered the statement of an unrelated company, Akzo Nobel, summarizing the industry's view that “there are particularly stringent and specific requirements of coating compositions for can interiors which are different from those for other coatings.” (Id. at 26.) Sherwin included various excerpts from previously issued PPG patents demonstrating that PPG was aware of these stringent requirements. (Id. at 23–25.) In response, PPG admitted that the stringent requirements for interior-can coatings were known, but argued that the '047 Patent did not claim those requirements. Specifically, PPG stated:

[Sherwin] argues that the stringent and demanding requirements for can coatings were well known to those skilled in this technology, yet criticizes Perez for failing to reiterate those well known requirements. Perez should not be criticized for not telling skilled persons what they already knew. Moreover, the '047 Patent claims contain no recitation of any of those supposedly critical features.

(ECF No. 216-14 at 9–10.)

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<sup>8</sup> PPG mischaracterizes the prosecution history by claiming that, at this stage, Sherwin “reiterated that ‘suitability’ requires an undefined balance of ‘stringent’ properties,” and urged that the prior art—in particular, Perez—did not sufficiently meet these performance requirements.” (ECF No. 230 at 17.)

<sup>9</sup> In the current proceeding, PPG erroneously attributes these additional properties to Sherwin and argues that “[t]his growing list of ‘stringent’ properties creates an endlessly malleable approach for determining whether a coating composition is ‘suitable for forming an inside spray coating.’” (ECF No. 230 at 17.)

From the foregoing, it is evident that—based upon the stringent requirements of the interior-can coatings’ industry—PPG has a clear understanding of what makes a coating composition “suitable for” use as a spray-applied interior-can coating. This understanding, in turn, supports Sherwin’s primary argument that the POSITA—with the appropriate education background and practical experience in the interior-can coatings’ industry—would know what makes a composition suitable for use as a spray-applied interior-can coating.

In sum, PPG failed to prove by clear and convincing evidence that the “suitable for” term is indefinite. The specification identifies certain base-line requirements that provide objective boundaries for the “suitable for” term. The ’047 Patent’s prosecution history reflects that the plain and ordinary meaning of the “suitable for” term is sufficiently clear to the POSITA. Accordingly, the “suitable for” term will be given its plain and ordinary meaning.

### 3. “inside spray beverage can coating composition” (the “preamble phrase”)

Asserted Patents and Claims	Sherwin’s Construction	PPG’s Construction
’900 Patent: claims 1, 3, 6, 8, 10, 12, 13, 16, 17, 19, 24, 26, 27, 29, 31, 32, 34, 36, 37, 38, 39, 43, 44, 47, 50, 52, 53, 55, 57, 68, 70, 71, 73, 79 and 80 ’854 Patent: claims 1, 6, 15, 20, 25, 31, 38, 43, 50 and 58	This term is limiting	This term is not limiting

The “preamble phrase” appears in the independent claims of the ’900 and the ’854 Patents. Claim 1 of the ’900 Patent is fairly representative and provides:

An inside spray beverage can coating composition, comprising:  
an emulsion polymerized latex polymer that is prepared from ingredients including:  
a salt of an acid- or anhydride-functional acrylic polymer and an amine;  
an ethylenically unsaturated monomer component that includes a vinyl aromatic compound and an oxirane-group containing monomer; and  
water;

wherein the coating composition is substantially free of bound bisphenol A, and wherein the coating composition is suitable for forming an inside spray coating of a two-piece drawn and ironed aluminum beverage can.

(’900 Patent, claim 1.) (emphasis added). The dispute between the parties is whether the above emphasized language, that is, the “preamble phrase” is limiting.

**a. Parties’ Arguments**

Sherwin contends that the “preamble phrase” is limiting because it imposes a structural limitation on the claimed composition, i.e., the claimed composition has “to be capable of being sprayed on the inside of a can.” (ECF No. 266 at 77.) Sherwin also argues that the claims of the ’900 and the ’854 Patents depend on the “preamble phrase” for antecedent basis. (ECF No. 248 at 7.) PPG asserts that the “preamble phrase” is not limiting because the claims define a structurally complete composition and the “preamble phrase” only states, at best, a convenient descriptive name or an intended use of the claimed composition. (ECF. Nos. 230 at 23–24; 266 at 79.)

**b. Analysis**

The court agrees with Sherwin that the “preamble phrase” is limiting. It is well established that

a preamble may be limiting if: it recites essential structure or steps; claims depend on a particular disputed preamble phrase for antecedent basis; the preamble is essential to understand limitations or terms in the claim body; the preamble recites additional structure or steps underscored as important by the specification; or there was clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art.

Georgetown Rail Equip. Co. v. Holland L.P., 867 F.3d 1229, 1236 (Fed. Cir. 2017) (quoting Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002)) (internal quotation marks and brackets omitted). Conversely, “[a] preamble is not a claim limitation if the claim body ‘defines a structurally complete invention . . . and uses the preamble only to state a

purpose or intended use for the invention.” Id. (quoting Rowe v. Dror, 112 F.3d 473, 478 (Fed. Cir. 1997)).

Whether a preamble should be treated as a claim limitation depends upon “the facts of each case in light of the claim as a whole and the invention described in the patent.” Storage Tech. Corp. v. Cisco Sys., 329 F.3d 823, 831 (Fed. Cir. 2003). Accordingly, to ascertain whether the “preamble phrase” limits the claims, the starting point of the court’s analysis is the language of the claims. After reviewing the claim language of the aforementioned exemplary claim 1 of the ’900 Patent, the court is not persuaded by PPG’s assertion that the “preamble phrase” merely states a convenient descriptive name or an intended use of the claimed composition. The court construes the “preamble phrase” as providing an essential structure of the claimed composition. Specifically, the court finds that the “preamble phrase” adds a distinct structural limitation that the claimed composition must be capable of being spray applied to the interior of a can.

Alternatively, the court finds that the claims in both the ’900 and the ’854 Patents depend on the “preamble phrase” for antecedent basis. As Sherwin correctly asserts, each of the independent claims in the ’854 Patent incorporating the “preamble phrase”—i.e., claims 1, 25, 38, 50, 58—also recite the “preamble phrase” as a limitation in the body of the claims.<sup>10</sup> (ECF No.

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<sup>10</sup> Claim 25 of the ’854 Patent is fairly representative and provides:

An inside spray beverage can coating composition, comprising:

- an emulsion polymerized latex polymer that is substantially free of bound [b]isphenol A and bound aromatic glycidyl ether compounds and is prepared by emulsion polymerizing an ethylenically unsaturated monomer component in the presence of an aqueous dispersion of a salt of an organic-solution polymerized acid- or anhydride-functional acrylic polymer and a tertiary amine, wherein the ethylenically unsaturated monomer component includes an alkyl (meth)acrylate, a glycidyl ester of an alpha, beta-ethylenically unsaturated acid or anhydride, and a vinyl aromatic component that is at least 20 wt-% of the ethylenically unsaturated monomer component; and
- a phenoplast crosslinker;

248 at 7.) The independent claims of the '900 Patent incorporating the “preamble phrase”—claims 1, 53, 73—also rely upon the “preamble phrase” as antecedent basis for limitations recited in the body of those claims by referring in the claim body back to a portion of the “preamble phrase,” that is, “the coating composition.”<sup>11</sup> (Id.)

Based on the foregoing, the court concludes that the “preamble phrase” is limiting and adopts the parties’ agreed upon construction regarding its meaning and scope. Accordingly, the “preamble phrase” refers to a “a coating composition that can be spray applied to a metal substrate such as a can using spray equipment.” (ECF No. 266 at 87.)

#### **IV. CONCLUSION**

For the reasons set forth above, the court adopts the foregoing claim constructions, and concludes that PPG failed to establish that any claim terms are indefinite. The court resolved the parties’ claim construction and indefiniteness dispute without relying on extrinsic evidence. Accordingly, the parties’ objections to extrinsic evidence (ECF Nos. 231, 249,) will be overruled

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wherein the inside spray beverage can coating composition is made without using PVC compounds.  
(’854 Patent, claim 25.) (emphasis added).

<sup>11</sup> Claim 1 of the ’900 Patent provides:

An inside spray beverage can coating composition, comprising:

an emulsion polymerized latex polymer that is prepared from ingredients including:

a salt of an acid- or anhydride-functional acrylic polymer and an amine;

an ethylenically unsaturated monomer component that includes a vinyl aromatic compound and an oxirane-group containing monomer; and

water;

wherein the coating composition is substantially free of bound bisphenol A, and wherein the coating composition is suitable for forming an inside spray coating of a two-piece drawn and ironed aluminum beverage can.

(’900 Patent, claim 1.) (emphasis added).

as moot. An order setting forth the construction of all claim terms that were disputed at any point in these proceedings will be filed contemporaneously with this opinion.

By the court,

Dated: August 13, 2018

/s/ JOY FLOWERS CONTI

Joy Flowers Conti

Chief United States District Judge